ARTICLE IX. INTERNATIONAL ENERGY CONSERVATION CODE

Sec. 8-900. Adopted; where filed; amendments.

(a) That certain document known as the "International Energy Conservation Code, 2009 Edition," which has been published as a code in book form by the International Code Council, chapters two through six, three (3) copies with amendments of which are on file in the office of the City Clerk.

(Ord. No. 2011.33, 9-22-11)

Charter reference—Adoption by reference, § 2.14. **State law reference**—Adoption by reference, A.R.S. § 9-801 et seq.

Sec. 401 GENERAL.

Section 401.1 is hereby amended as follows:

401.1 Scope. This chapter applies to residential buildings.

Exception: Evaporative coolers are not covered by this code.

Section 401.2 is hereby amended as follows:

Section 401.2 Compliance. Projects shall comply with Sections 401, 402.4, 402.5, and 403.1, 403.2.2, 403.2.3, and 403.3 through 403.9 (referred to as the mandatory provisions) and either:

- 1. Sections 402.1 through 402.3, 403.2.1 and 404.1 (prescriptive); or
- 2. Section 405 (performance).

As an alternative, additions, alterations, remodels, and repairs may comply with the department's standard energy conservation details.

(Ord. No. 2011.33, 9-22-11)

Sec. 402 BUILDING THERMAL ENVELOPE

Section 402.2.4.1 is hereby amended as follows:

Section 402.2.4.1 Insulation for Masonry Mass walls. Exterior or Fire Walls shall not use absorbent (open cell and water-reactive, supporting mold growth) organic insulation at the exterior, integral between wythes, or integral within otherwise unfilled grout spaces such as within cores or cells of Concrete Masonry, Clay, or Shale Masonry Units. To maintain the required R-Values and U-Factors, closed cell insulation (non-absorbent) such as, though not limited to, closed-cell polyurethane foamed-in-place as well as closed cell expanded, extruded, or sprayed polystyrenes, gas-impermeable faced polyisocyanurates, adsorbent, non-water reactive, non-mold supporting insulation, and inorganic types are acceptable.

Section 402.2.4.2 is hereby amended as follows:

Section 402.2.4.2 Drainage of Masonry. If an exterior post-applied film-forming coating and/or sealant (paints, block-fillers, parges, breathable film-formers, etc.) is used on exposed masonry then flashings and weeps shall drain to the exterior as designed.

Section 402.2.4.3 is hereby amended as follows:

Section 402.2.4.3 Moisture Resistance of Masonry. All exterior exposed-face Concrete Masonry Units (CMU) which have Integral Water Repellent (IWR) shall comply with National Concrete Masonry Association (NCMA) standards and tests (NCMA CMU WR1, WR2, or WR3) for moisture resistance. Exposed mortar shall have Integral Water Repellent (IWR).

If post-applied coatings and / or sealants are used, they shall give evidence of moisture resistance so as to maintain thermal efficiency of the masonry wall assembly.

When moisture resistance is demonstrated the related tests or demonstrations need to be performed before interior finishes are in place. (Ord. No. 2011.33, 9-22-11)

Sec. 403 SYSTEMS (Mandatory)

Section 403.2.1 is hereby amended as follows:

Section 403.2.1 Insulation. Supply ducts shall be insulated to a minimum of R-8. All other ducts shall be insulated to a minimum of R-6.

Exceptions:

- 1. Ducts or portions thereof located completely inside the building thermal envelope.
- 2. Supply and return ducts may be insulated to a minimum of R-6 when one or more of the following conditions are met:
 - Minimum seer rating of space heating/cooling system is 14.
 - Maximum U-factor is 0.64 and maximum SHGC is 0.35 for all fenestration products.
 - Wall insulation minimum R-value is R-19.
 - Residential buildings that meet the requirements of a national, state or local energy efficiency program to exceed the energy efficiency required by this code. Buildings approved in writing by such an energy efficiency program shall be considered in compliance with this code. The requirements identified as "mandatory" in Chapters 4 and 5 of this code, as applicable, shall be met.
 - Residential buildings that meet the requirements of Section 404.

(Ord. No. 2011.33, 9-22-11)

Section 501 GENERAL

Section 501.1 is hereby amended as follows:

Section 501.1 Scope. The requirements contained in this chapter are applicable to commercial buildings, or portions of commercial buildings. These commercial buildings shall

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meet either the requirements of ASHRAE/IESNA Standard 90.1, Energy Standard for Buildings Except for Low-Rise Residential Buildings, or the requirements contained in this chapter.

Exceptions:

- 1. Lighting and their controls, that are required by the City of Tempe, Zoning and Development Code, are not regulated by this code.
- 2. Evaporative coolers are not covered by this code. (Ord. No. 2011.33, 9-22-11)

Section 502 BUILDING ENVELOPE REQUIREMENTS

Section 502.2.3.1 is hereby amended as follows:

Section 502.2.3.1 Insulation for Masonry Mass walls. Exterior or Fire Walls shall not use absorbent (open cell and water-reactive, supporting mold growth) organic insulation at the exterior, integral between wythes, or integral within otherwise unfilled grout spaces such as within cores or cells of Concrete Masonry, Clay, or Shale Masonry Units. To maintain the required R-Values and U-Factors, closed cell insulation (non-absorbent) such as, though not limited to, closed-cell polyurethane foamed-in-place as well as closed cell expanded, extruded, or sprayed polystyrenes, gas-impermeable faced polyisocyanurates, adsorbent, non-water reactive, non-mold supporting insulation, and inorganic types are acceptable.

Section 502.2.3.2 is hereby amended as follows:

Section 502.2.3.2 Drainage of Masonry. If an exterior post-applied film-forming coating and/or sealant (paints, block-fillers, parges, breathable film-formers, etc.) is used on exposed masonry then flashings and weeps shall drain to the exterior as designed.

Section 502.2.3.3 is hereby amended as follows:

Section 502.2.3.3. Moisture Resistance of Masonry. All exterior exposed-face Concrete Masonry Units (CMU) which have Integral Water Repellent (IWR) shall comply with National Concrete Masonry Association (NCMA) standards and tests (NCMA CMU WR1, WR2, or WR3) for moisture resistance. Exposed mortar shall have Integral Water Repellent (IWR).

If post-applied coatings and / or sealants are used, they shall give evidence of moisture resistance so as to maintain thermal efficiency of the masonry wall assembly.

When moisture resistance is demonstrated the related tests or demonstrations need to be performed before interior finishes are in place. (Ord. No. 2011.33, 9-22-11)